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| Notice of Allowability | Application No. | Applicant(s) | |
| | 09/668,407 | CHU, TAM-ANH | |
| | Examiner | Art Unit | |
| | Michael J. Moore, Jr. | 2616 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

- 1. ☒ This communication is responsive to the Amendment with RCE filed 5/11/07.
- 2. ☒ The allowed claim(s) is/are 1-48.
- 3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 - 1. ☐ Certified copies of the priority documents have been received.
 - 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

- 4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 - 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
- 6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413), Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/11/07 has been entered.

Allowable Subject Matter

2. Claims **1-48** are allowed.
3. The following is an examiner's statement of reasons for allowance:

Regarding *amended* claim 1, *Sang et al. (U.S. 6,401,147) (hereinafter "Sang")* teaches the receive FIFO buffer (buffer memory of first type) of MAC unit 20 of Figure 2 that stores data packets having header information (connection identifier) received from network stations 14 (connection) of Figure 1 as spoken of on column 6, lines 47-61.

Sang also teaches the data packets received by a corresponding MAC port and stored in a corresponding receive FIFO (organized into at least one chunk data block) as spoken of on column 6, lines 50-52.

Sang also teaches the packet header information (connection identifier) that includes source, destination, and VLAN address information as spoken of on column 6, lines 58-61.

Sang also teaches the data packets received by MAC unit 20 of Figure 2 that are associated with a network station 14 of Figure 1.

Sang also teaches external SSRAM memory block 36 (packet memory of second type) coupled to MAC unit 20 of Figure 1 that receives burst writes of data (chunk data block) from a corresponding receive FIFO buffer (buffer memory) as spoken of on column 8, lines 17-20.

Sang also teaches the transmit FIFO buffer (second buffer memory) of MAC unit 20 of Figure 2 that receives data frames retrieved from external memory 36 as spoken of on column 6, lines 47-49, as well as column 7, lines 32-39.

Sang as well as the other prior art of record fail to teach “a write circuit to write the at least one chunk data block to the packet memory in response to a transfer condition if the packet size indicates the packet is long, and to write the at least one chunk data block to the second buffer memory in response to the transfer condition if the packet size indicates the packet is short” in combination with the other limitations of claim 1.

Regarding claims 2-16, these claims are further limiting to claim 1 and are thus also allowable over the prior art of record.

Regarding *amended* claim 17, *Sang* teaches the receive FIFO buffer (buffer memory of first type) of MAC unit 20 of Figure 2 that stores data packets having header information (connection identifier) received from network stations 14 (connection) of Figure 1 as spoken of on column 6, lines 47-61.

Sang also teaches the data packets received by a corresponding MAC port and stored in a corresponding receive FIFO (organized into at least one chunk data block).

Sang also teaches the packet header information (connection identifier) that includes source, destination, and VLAN address information as spoken of on column 6, lines 58-61.

Sang also teaches the data packets received by MAC unit 20 of Figure 2 that are associated with a network station 14 of Figure 1.

Sang as well as the other prior art of record fail to teach “writing the at least one chunk data block to a packet memory of a second type in response to a transfer condition if the packet size indicates the packet is long, and to a second buffer memory of the first type in response to a transfer condition if the packet size indicates the packet is short” in combination with the other limitations of claim **17**.

Regarding claims **18-32**, these claims are further limiting to claim **17** and are thus also allowable over the prior art of record.

Regarding *amended* claim **33**, *Sang* teaches the reduced media independent interfaces 18 (channel) of Figure 1 that interface network stations 14 with receive FIFOs (ingress) and transmit FIFOs (egress) of MAC units 20 of Figure 1 as spoken of on column 5, lines 44-57 as well as column 6, lines 47-57.

Sang also teaches the multiport switch 12a (data buffer circuit) of Figure 1 coupled to reduced media independent interfaces 18 (channel).

Sang also teaches the receive FIFO buffer (input buffer memory of first type) of MAC unit 20 of Figure 2 that stores data packets having header information (connection identifier) received from network stations 14 (connection) of Figure 1 as spoken of on column 6, lines 47-61.

Sang also teaches the data packets received by a corresponding MAC port and stored in a corresponding received FIFO (organized into at least one chunk data block).

Sang also teaches the packet header information (connection identifier) that includes source, destination, and VLAN address information as spoken of on column 6, lines 58-61.

Sang also teaches the data packets received by MAC unit 20 of Figure 2 that are associated with a network station 14 of Figure 1.

Sang also teaches the transmit FIFO buffer (output buffer memory) of MAC unit 20 of Figure 2 that receives data frames retrieved from external memory 36 as spoken of on column 6, lines 47-49, as well as column 7, lines 32-39.

Sang also teaches external SSRAM memory block 36 (packet memory of second type) coupled to MAC unit 20 of Figure 1 that receives burst writes of data (chunk data block) from a corresponding receive FIFO buffer (buffer memory) as spoken of on column 8, lines 17-20.

Sang as well as the other prior art of record fail to teach “a write circuit to write the at least one chunk data block to the packet memory in response to a transfer condition if the packet size indicates the packet is long, and to write the at least one chunk data block to the second buffer memory in response to the transfer condition if the packet size indicates the packet is short” in combination with the other limitations of claim **33**.

Regarding claims **34-48**, these claims are further limiting to claim **33** and are thus also allowable over the prior art of record.

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Born (U.S. 6,631,484) is an additional reference considered pertinent to this application.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Moore, Jr. whose telephone number is (571) 272-3168. The examiner can normally be reached on Monday-Friday (7:30am - 4:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wing F. Chan can be reached at (571) 272-7493. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Michael J. Moore, Jr.
Examiner
Art Unit 2616

mjm MM


7/19/07
WING CHAN
SUPERVISORY PATENT EXAMINER